

KISTI

LHCOPN of GSDC/KISTI and LHCONE Implementation Plan



KREONET Center
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CERN LHC TierX, KREONET

- **LHC ALICE Tier1 : KISTI GSDC (Global Science Experimental Data Hub Center)**
 - LHCOPN between Daejeon, South Korea and Geneva, Swiss : 2Gbps
 - Connect to KREONet2 with 10Gbps * 2
- **LHC CMS Tier2 : KNU CHEP (Kyungpook National University, Center for High Energy Physics), UOS SSCC (University of Seoul SuperComputer Center)**
 - Connect to KREONET with 10G/1Gbps
- **LHC Alice Tier3 : PNU (Pusan National University) KoALICE Center, Yonsei University**
 - Connect to KREONET with 1Gbps
- **LHC CMS Tier3 : KCMS center of Korea University, Seoul University, SKKU (Sungkyunkwan University), Chonnam National University, Chonbuk National University, Kangwon National University**
 - Connect to KREONET with 1Gbps

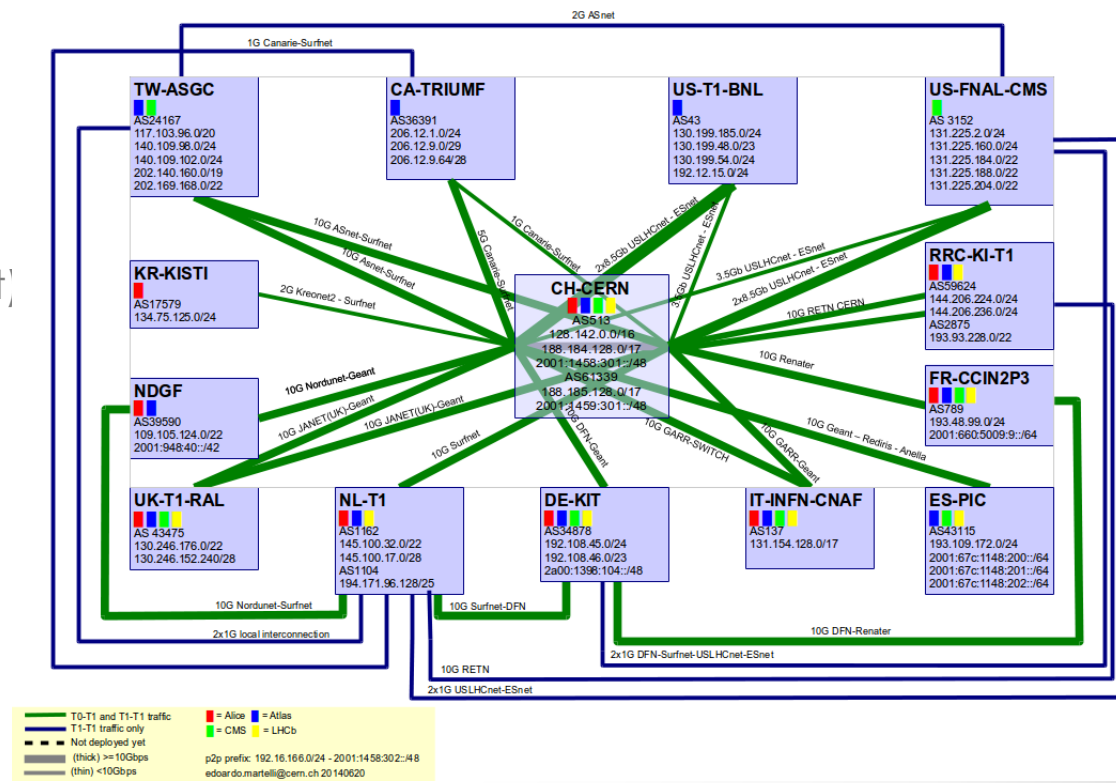
(Including candidate sites)

LHCOPN

-KISTI' GSDC LHC ALICE Tier1-

- GSDC/KISTI ~ CERN
2Gbps Network
 - Be upgraded 10Gbps at the end of this year
- Backup Network
 - **Direct peering** between KREONet2 and CERN at Chicago, 10Gbps (present)
 - **LHCONE L3VPN** could be the secondary backup network of LHCOPN
- Getting transit over LHCOPN link for European CERN LHC Tier1

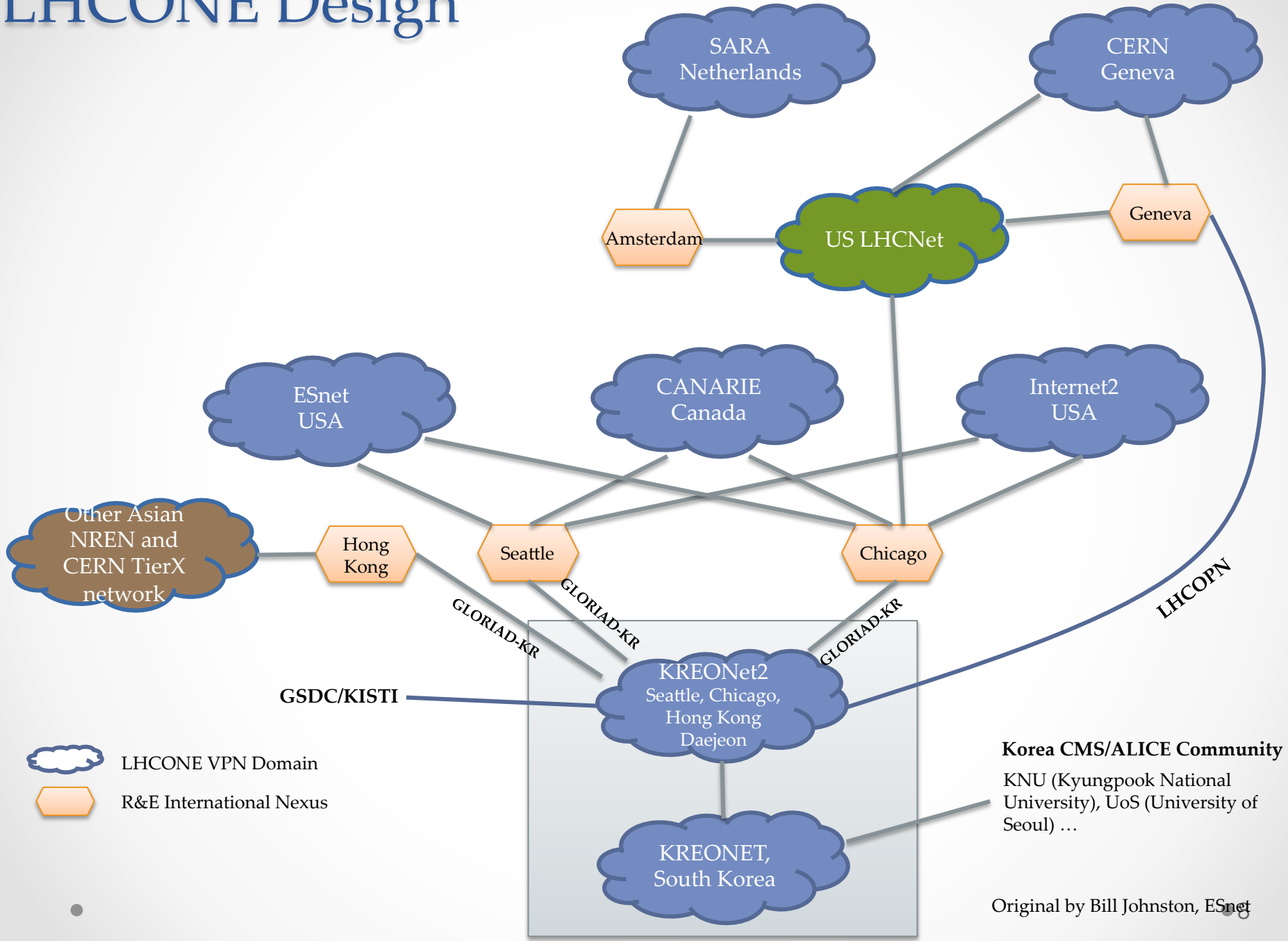
LHCOPN





LHCONE Implementation of KREONET/GLORIAD-KR (plan)

- LHC Open Network Environment
- LHCONE Multipoint Service, VRF Instance
 - LHCONE L3VPN Service
- Point-to-Point Service
 - Dynamic Circuit Networking Service with NSI
 - SDN/OpenFlow based transportation service : Multiple Stream Transportation, Stream Aggregation,...
- Multi-Point Service
 - KREONET Dynamic Ethernet Service
- Allocating more than 1Gbps*n over GLORIAD circuit for LHCONE L3VPN (plan)
 - Daejeon, South Korea ~ Hong Kong, China
 - Daejeon, South Korea ~ Seattle, United States
 - Daejeon, South Korea ~ Chicago, United States

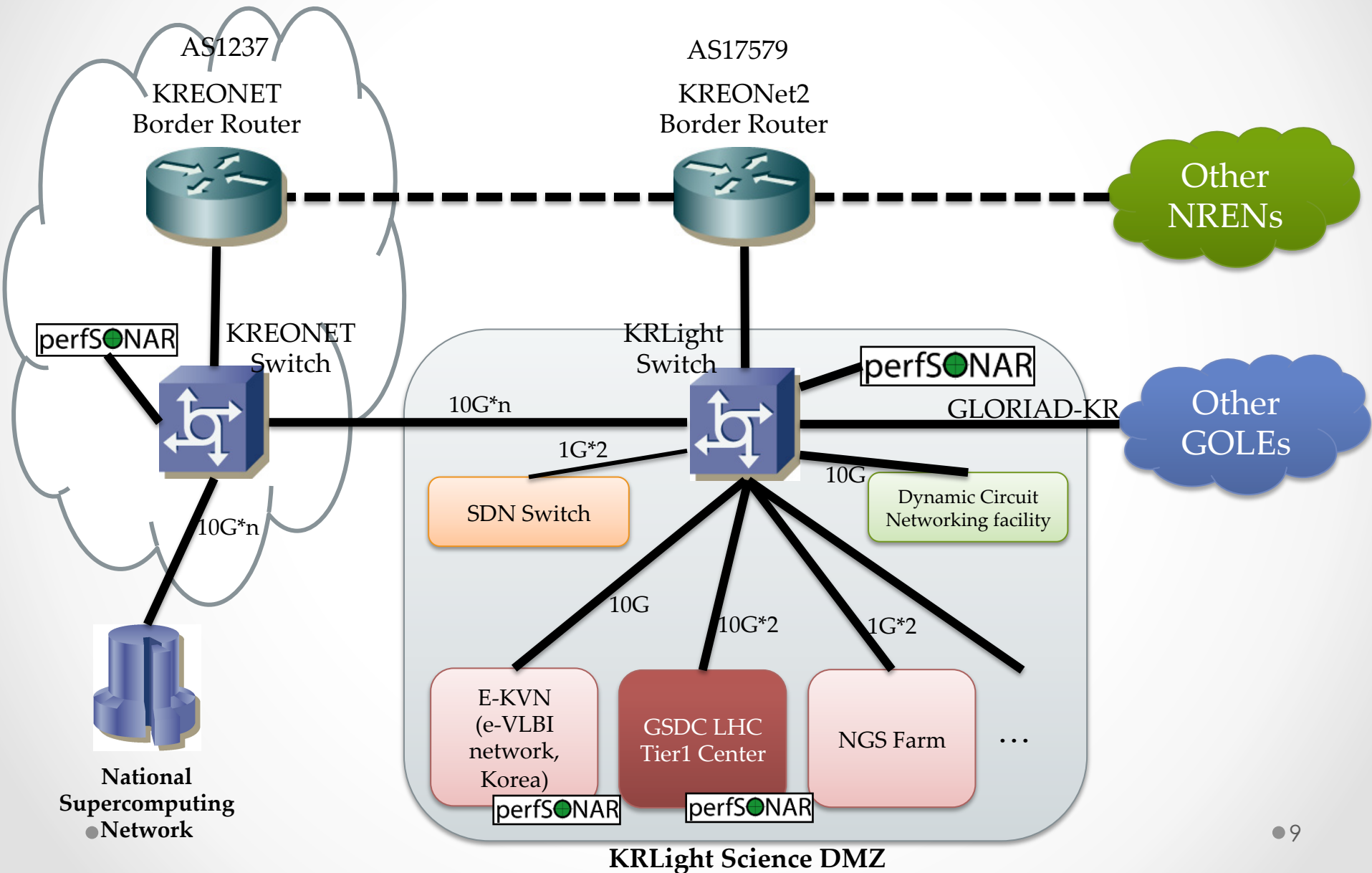
LHCONE Design



 LHCONE VPN Domain
 R&E International Nexus

Korea CMS/ALICE Community
 KNU (Kyungpook National University), UoS (University of Seoul) ...

KRLight Science DMZ



Questions

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